

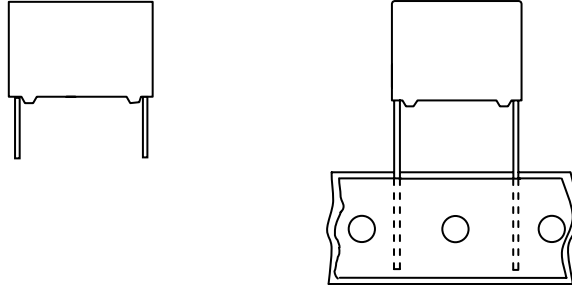
# PFC Input Capacitors

## Metallized Polypropylene film capacitors

**PCMP 372**  
(MPP)

MKP RADIAL POTTED CAPACITORS

Pitch 10.0/15.0/22.5/27.5mm



### QUICK REFERENCE DATA

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Capacitance range (E6 series)    | 0.022 to 2.2 $\mu$ F                  |
| Capacitance tolerance            | $\pm 5\%$ , $\pm 10\%$                |
| Rated voltage (DC)               | 450V, 500V, 630 V                     |
| Climatic category                | 40/105/21                             |
| Temperature range                | -40 $^{\circ}$ C ~ + 105 $^{\circ}$ C |
| Reference specification          | IEC 60384-16                          |
| Potting & Encapsulation material | Qualified in accordance with UL94V-0  |

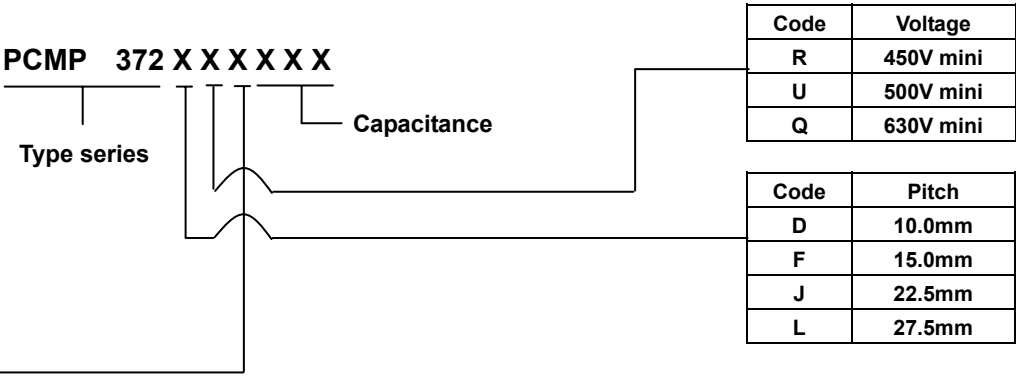
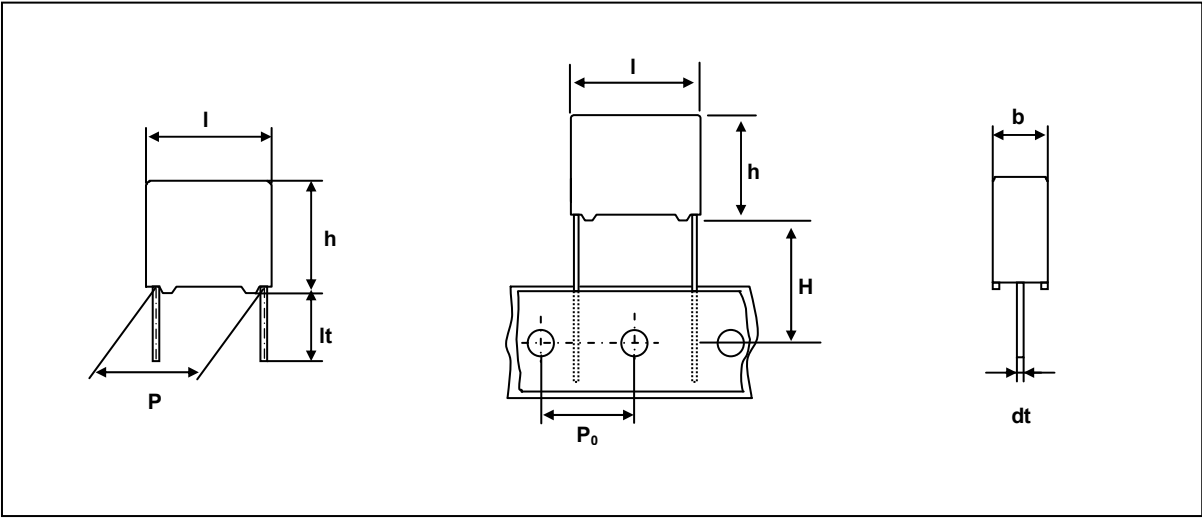
|                                                                                                                                                                                                                           |                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>FEATURES</b> <ul style="list-style-type: none"> <li>. Low-noise</li> <li>. Self-healing properties</li> <li>. Low dissipation factor</li> <li>. Low ESR</li> <li>. Supplied loose in box &amp; ammo packing</li> </ul> | <b>APPLICATIONS</b> <ul style="list-style-type: none"> <li>. PFC Input Capacitor for LCD/PDP power</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

- Please refer to caution and warning at <http://www.pilkor.co.kr/download/Introductions.pdf> before using these products.

**PFC Input Capacitors**  
**Metallized Polypropylene film capacitors**

**PCMP 372**  
**(MPP)**

**Ordering Information**



| Available versions |                |          |                      |                                 | Product (I <sub>max</sub> ) |      |      |      |
|--------------------|----------------|----------|----------------------|---------------------------------|-----------------------------|------|------|------|
| code               | Packing method | C – tol. | Lead length & Height | Hole to hole ( P <sub>o</sub> ) | 12.5                        | 18.0 | 26.0 | 31.0 |
|                    |                |          |                      |                                 | Pitch (P)                   |      |      |      |
| 3                  | Loose in box   | ± 5%     | lt = 5.0±1.0mm       | -                               | 10.0                        | 15.0 | 22.5 | 27.5 |
| 4                  | Loose in box   | ±10%     | lt = 5.0±1.0mm       | -                               | 10.0                        | 15.0 | 22.5 | 27.5 |
| 5                  | Loose in box   | ± 5%     | lt = 25±2.0mm        | -                               | 10.0                        | 15.0 | 22.5 | 27.5 |
| 6                  | Loose in box   | ±10%     | lt = 25±2.0mm        | -                               | 10.0                        | 15.0 | 22.5 | 27.5 |
| 7                  | Ammopack       | ± 5%     | H = 18.5 mm*         | 12.7mm                          | 10.0                        | 15.0 | 22.5 | 27.5 |
| 8                  | Ammopack       | ±10%     | H = 18.5 mm*         | 12.7mm                          | 10.0                        | 15.0 | 22.5 | 27.5 |

\* H(In-tape height) ; For detailed specifications refer to chapter PACKAGING

**PFC Input Capacitors****PCMP 372****Metallized Polypropylene film capacitors****(MPP)****Packaging Information**

| SMALLEST PACKING QUANTITIES<br>( SPQ ) | Loose in box   |                 |
|----------------------------------------|----------------|-----------------|
|                                        | It = 5.0±1.0mm | It = 25.0±2.0mm |
| DIMENSIONS                             | SPQ            | SPQ             |
| 4.0 X 10.0 X 12.5                      | 2000           | 1200            |
| 5.0 X 11.0 X 12.5                      | 1500           | 1000            |
| 6.0 X 12.0 X 12.5                      | 1000           | 1000            |
| 5.0 X 11.0 X 18.0                      | 1000           | 1000            |
| 6.0 X 12.0 X 18.0                      | 1000           | 1000            |
| 7.0 X 13.5 X 18.0                      | 1000           | 1000            |
| 8.5 X 15.0 X 18.0                      | 1000           | 1000            |
| 10.0 X 16.5 X 18.0                     | 1000           | 1000            |
| 11.0 X 18.5 X 18.0                     | 1000           | 1000            |
| 6.0 X 15.5 X 26.0                      | 1000           | 1000            |
| 7.0 X 16.5 X 26.0                      | 1000           | 1000            |
| 8.5 X 18.0 X 26.0                      | 500            | 500             |
| 10.0 X 19.5 X 26.0                     | 500            | 500             |
| 11.5 X 21.0 X 26.0                     | 500            | 500             |
| 12.5 X 22.5 X 26.0                     | 500            | 500             |
| 13.0 X 23.0 X 26.0                     | 500            | 500             |
| 11.0 X 21.0 X 31.0                     | 500            | 250             |
| 13.0 X 23.0 X 31.0                     | 250            | 250             |
| 15.0 X 25.0 X 31.0                     | 250            | 250             |
| 18.0 X 28.0 X 31.0                     | 200            | 200             |

**PFC Input Capacitors****PCMP 372****Metallized Polypropylene film capacitors****(MPP)****V<sub>Rdc</sub> = 450V & 500V****mini type**

| Cap.<br>( $\mu$ F)        | b x h x l<br>(mm)  | Mass<br>(g) | CATALOGUE NUMBER           |                      |
|---------------------------|--------------------|-------------|----------------------------|----------------------|
|                           |                    |             | PCMP 372.....              |                      |
|                           |                    |             | loose in box               |                      |
|                           |                    |             | 450V mini                  | 500V mini            |
|                           |                    |             | lt= 5.0 $\pm$ 1.0 mm       | lt= 5.0 $\pm$ 1.0 mm |
|                           |                    |             | C – tol. $\pm$ 10%         | C – tol. $\pm$ 10%   |
| Pitch = 10.0 $\pm$ 0.4 mm |                    |             | dt = 0.6 + 0.06 / -0.05 mm |                      |
| 0.10                      | 4.0 x 10.0 x 12.5  | 0.8         | PCMP 372DR4104             | PCMP 372DU4104       |
| 0.15                      | 5.0 x 11.0 x 12.5  | 0.8         | PCMP 372DR4154             | PCMP 372DU4154       |
| 0.22                      | 5.0 x 11.0 x 12.5  | 0.9         | PCMP 372DR4224             | PCMP 372DU4224       |
| 0.33                      | 6.2 x 12.3 x 12.5  | 1.0         | PCMP 372DR4334             | PCMP 372DU4334       |
| Pitch = 15.0 $\pm$ 0.4 mm |                    |             | dt = 0.8 + 0.08 / -0.05 mm |                      |
| 0.22                      | 5.0 x 11.0 x 18.0  | 1.2         | PCMP 372FR4224             | PCMP 372FU4224       |
| 0.33                      | 5.0 x 11.0 x 18.0  | 1.2         | PCMP 372FR4334             | PCMP 372FU4334       |
| 0.47                      | 6.0 x 12.0 x 18.0  | 1.4         | PCMP 372FR4474             | PCMP 372FU4474       |
| 0.56                      | 7.0 x 13.5 x 18.0  | 1.9         | PCMP 372FR4564             | PCMP 372FU4564       |
| 0.68                      | 8.5 x 15.0 x 18.0  | 2.6         | PCMP 372FR4684             | PCMP 372FU4684       |
| 0.82                      | 8.5 x 15.0 x 18.0  | 2.6         | PCMP 372FR4824             | PCMP 372FU4824       |
| 1.0                       | 8.5 x 15.0 x 18.0  | 2.6         | *PCMP 372FR4105            | *PCMP 372FU4105      |
| 1.0                       | 10.0 x 16.5 x 18.0 | 3.1         | **PCMP 372FR3105           | **PCMP 372FU3105     |
| 1.5                       | 11.0 x 18.5 x 18.0 | 4.1         | PCMP 372FR4155             | PCMP 372FU4155       |
| Pitch = 22.5 $\pm$ 0.4 mm |                    |             | dt = 0.8 + 0.08 / -0.05 mm |                      |
| 0.47                      | 6.0 x 15.5 x 26.0  | 3.0         | PCMP 372JR4474             | PCMP 372JU4474       |
| 0.56                      | 6.0 x 15.5 x 26.0  | 3.0         | PCMP 372JR4564             | PCMP 372JU4564       |
| 0.68                      | 6.0 x 15.5 x 26.0  | 3.0         | PCMP 372JR4684             | PCMP 372JU4684       |
| 0.82                      | 7.0 x 16.5 x 26.0  | 3.5         | PCMP 372JR4824             | PCMP 372JU4824       |
| 1.0                       | 7.0 x 16.5 x 26.0  | 3.5         | PCMP 372JR4105             | PCMP 372JU4105       |
| 1.5                       | 8.5 x 18.0 x 26.0  | 4.4         | PCMP 372JR4155             | PCMP 372JU4155       |
| 2.2                       | 10.0 x 19.5 x 26.0 | 5.5         | PCMP 372JR4225             | PCMP 372JU4225       |

\* 10% tolerance products only / \*\* 5% tolerance products only

**PFC Input Capacitors****PCMP 372****Metallized Polypropylene film capacitors****(MPP)****V<sub>Rdc</sub> = 630 V****mini type**

| Cap.<br>( $\mu$ F)                                        | b x h x l<br>(mm)  | Mass<br>(g) | CATALOGUE NUMBER     |                       |
|-----------------------------------------------------------|--------------------|-------------|----------------------|-----------------------|
|                                                           |                    |             | PCMP 372.....        |                       |
|                                                           |                    |             | loose in box         |                       |
|                                                           |                    |             | lt= 5.0 $\pm$ 1.0 mm | lt= 25.0 $\pm$ 2.0 mm |
|                                                           |                    |             | C – tol. $\pm$ 10%   | C – tol. $\pm$ 10%    |
| Pitch = 10.0 $\pm$ 0.4 mm      dt = 0.6 + 0.06 / -0.05 mm |                    |             |                      |                       |
| 0.022                                                     | 4.0 x 10.0 x 12.5  | 0.8         | PCMP 372DQ4223       | PCMP 372DQ6223        |
| 0.033                                                     | 5.0 x 11.0 x 12.5  | 0.9         | PCMP 372DQ4333       | PCMP 372DQ6333        |
| 0.047                                                     | 5.0 x 11.0 x 12.5  | 0.9         | PCMP 372DQ4473       | PCMP 372DQ6473        |
| 0.068                                                     | 5.0 x 11.0 x 12.5  | 0.9         | PCMP 372DQ4683       | PCMP 372DQ6683        |
| 0.10                                                      | 5.0 x 11.0 x 12.5  | 0.9         | PCMP 372DQ4104       | PCMP 372DQ6104        |
| 0.15                                                      | 6.0 x 12.0 x 12.5  | 0.9         | PCMP 372DQ4154       | PCMP 372DQ6154        |
| 0.22                                                      | 6.2 x 12.3 x 12.5  | 1.0         | PCMP 372DQ4224       | PCMP 372DQ6224        |
| Pitch = 15.0 $\pm$ 0.4 mm      dt = 0.8 + 0.08 / -0.05 mm |                    |             |                      |                       |
| 0.10                                                      | 5.0 x 11.0 x 18.0  | 1.2         | PCMP 372FQ4104       | PCMP 372FQ6104        |
| 0.15                                                      | 5.0 x 11.0 x 18.0  | 1.2         | PCMP 372FQ4154       | PCMP 372FQ6154        |
| 0.22                                                      | 6.0 x 12.0 x 18.0  | 1.4         | PCMP 372FQ4224       | PCMP 372FQ6224        |
| 0.33                                                      | 7.0 x 13.5 x 18.0  | 1.9         | PCMP 372FQ4334       | PCMP 372FQ6334        |
| 0.47                                                      | 8.5 x 15.0 x 18.0  | 2.6         | PCMP 372FQ4474       | PCMP 372FQ6474        |
| 0.68                                                      | 10.0 x 16.5 x 18.0 | 3.1         | PCMP 372FQ4684       | PCMP 372FQ6684        |
| 0.82                                                      | 11.0 x 18.5 x 18.0 | 4.1         | PCMP 372FQ4824       | PCMP 372FQ6824        |
| 1.0                                                       | 11.0 x 18.5 x 18.0 | 4.1         | PCMP 372FQ4105       | PCMP 372FQ6105        |
| Pitch = 22.5 $\pm$ 0.4 mm      dt = 0.8 + 0.08 / -0.05 mm |                    |             |                      |                       |
| 0.47                                                      | 7.0 x 16.5 x 26.0  | 3.5         | PCMP 372JQ4474       | PCMP 372JQ6474        |
| 0.68                                                      | 7.0 x 16.5 x 26.0  | 3.5         | PCMP 372JQ4684       | PCMP 372JQ6684        |
| 0.82                                                      | 8.5 x 18.0 x 26.0  | 4.4         | PCMP 372JQ4824       | PCMP 372JQ6824        |
| 1.0                                                       | 8.5 x 18.0 x 26.0  | 4.4         | PCMP 372JQ4105       | PCMP 372JQ6105        |
| 1.5                                                       | 10.0 x 19.5 x 26.0 | 5.5         | PCMP 372JQ4155       | PCMP 372JQ6155        |
| 2.2                                                       | 13.0 x 23.0 x 26.0 | 8.0         | PCMP 372JQ4225       | PCMP 372JQ6225        |

**MOUNTING****NORMAL USE**

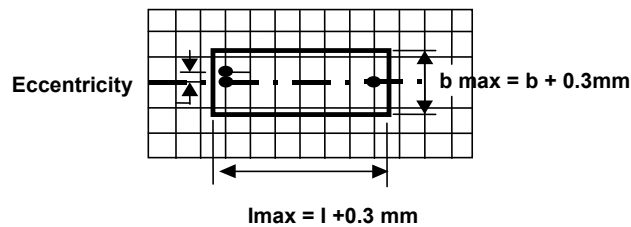
The capacitors are designed for mounting on printed-circuit boards. The capacitors packed in bandoliers are designed for mounting on printed-circuit boards by means of automatic insertion machines.

**SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK**

- . For pitches of 15 mm the capacitors shall be mechanically fixed by the leads
- . For larger pitches the capacitors shall be mounted in the same way and the body clamped.

**SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD**

The maximum length and width of film capacitors are shown in the following drawing ;



- Eccentricity as in drawing.  
The maximum eccentricity is smaller than or equal to the lead diameter of the product concerned.
- Product height with seating plane as given by IEC 60717 as reference :  $h_{\max} \leq h + 0.3 \text{ mm}$

**PFC Input Capacitors****PCMP 372****Metallized Polypropylene film capacitors****(MPP)****STORAGE TEMPERATURE**

. Storage temperature :  $T_{stg} = -25$  to  $+40^{\circ}\text{C}$  with RH maximum 80% without condensation.

**RATINGS AND CHARACTERISTICS**

Unless otherwise specified all electrical values apply at an ambient temperature of  $23 \pm 1^{\circ}\text{C}$ , an atmospheric pressure of 86 to 106kPa and a relative humidity of  $50 \pm 2\%$ .

For reference testing a conditioning period shall be applied of  $96 \pm 4$  hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

**CHARACTERISTICS****● Test Voltage**

- Cut off current 10mA / rise time 100V/sec.
- Test Voltage ( between lead and lead ) :  $1.6 \times V_{Rdc}$ , 1min.
- Test Voltage ( between leads and case ) :  $2840 V_{dc}$ , 1min.

**● Capacitance**

. Capacitance : Within specified tolerance range when sine wave AC is applied  
at 1kHz  $\pm 200\text{Hz}$  and  $5V_{rms}$

**● Dissipation Factor(DF)**

. Dissipation factor: When sine wave AC is applied at 10kHz and  $\leq 1 V_{rms}$ ,  $DF < 20 \times 10^{-4}$

**● Insulation Resistance**

. The insulation resistance is measured for 1min.  $\pm 5s$ , at 100V for  $V_{Rdc} < 500V$ , at 500V for  $V_{Rdc} \geq 500V$

| Rated voltage                   | Minimum RC                      | Minimum Insulation Resistance      |
|---------------------------------|---------------------------------|------------------------------------|
|                                 | Capacitance $> 0.33\mu\text{F}$ | Capacitance $\leq 0.33\mu\text{F}$ |
| 450V mini/ 500V mini/ 630V mini | $> 10,000s$                     | $> 30G\Omega$                      |

( R = insulation resistance between the terminations [ $\Omega$ ], C= capacitance[Farad] )

**● Self heating temperature**

. Maximum allowable rise is  $7^{\circ}\text{C}$

**● Rated Voltage Pulse Load Slope(dV/dt)<sub>R</sub>**

. For values see specific reference data. IF the pulse voltage is lower than the rated voltage, the values of the specific reference data must be multiplied by  $V_{Rdc}$  and divided by the applied voltage.

| Rated voltage        | MAXIMUM RATED VOLTAGE PULSE SLOPE (V/ $\mu\text{s}$ ) |             |             |             |
|----------------------|-------------------------------------------------------|-------------|-------------|-------------|
|                      | P = 10.0 mm                                           | P = 15.0 mm | P = 22.5 mm | P = 27.5 mm |
| 450V mini/ 500V mini | 150                                                   | 95          | 60          | -           |
| 630V mini            | 270                                                   | 141         | 85          | 65          |

**PRODUCT MARKING**

The capacitors are marked with the following informations :

- . Rated capacitance in code according to IEC 60062 ( 680n ; 680nF )
- . Tolerance on rated capacitance ( J :  $\pm 5\%$ , K :  $\pm 10\%$  )
- . Rated DC voltage ( 630V )
- . Manufacturer's mark ( PILKOR )
- . Manufacturer's type designation ( 372 )
- . Code for dielectric material ( MKP )
- . Date code number ( WK.... )

**Example of marking**

Pitch = 10.0mm

220n K 450V  
 372 MKP ....  
 PILKOR

Marking on the side

Pitch = 15.0mm

470n K 630V  
 372 MKP

Marking on the top

PILKOR  
 WK....

Marking on the side

Pitch = 22.5mm or 27.5mm

680n K 630V  
 372 MKP

Marking on the top

PILKOR  
 WK....

Marking on the side

or

680n K 630V PILKOR  
 372 MKP WK....

Marking on the top

Pitch = 27.5mm

2u2 K 630V  
 372 MKP ....  
 PILKOR

Marking on the top